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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,161	05/25/2001	Andrew Pickering	TIL-32491	5608
23494	7590	08/25/2004	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			LUGO, DAVID B	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 08/25/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/866,161

Applicant(s)

PICKERING ET AL.

Examiner

David B. Lugo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 8, 9 and 12 is/are rejected.
- 7) ☒ Claim(s) 3, 5-7, 10, 11 and 13-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in the United Kingdom on 5/25/00. It is noted, however, that applicant has not filed a certified copy of the 0012813.2 application as required by 35 U.S.C. 119(b).

### *Specification*

2. The disclosure is objected to because of the following informalities:
- a. In the preliminary amendment filed 5/25/01, the amendments to the specification and abstract have not been entered because specific instructions to replace those sections have not been made. Specific instructions to replace the abstract and the first paragraph under the heading "Summary of Invention" should be made in conformance with current amendment practices in a subsequent amendment.
  - b. Page 2, in the last line of the first paragraph, the term "Askew@" is unclear and should be corrected.
  - c. Page 5, in the fourth line, the term "Awrap around@" should be corrected.
  - d. Page 6, in the sixth line from the bottom of the page, "□2Td" should be corrected.
  - e. Page 7, lines 11-12, the country of the patent application should be identified.
  - f. Page 7, in line 11 from the bottom of the page, "□2Td" should be corrected.
  - g. Page 8, line 3 of the first full paragraph, "□2UI" should be corrected.
  - h. Page 8, line 4 of the second full paragraph, "□2Td" should be corrected.
  - i. Page 9, line 4 of the last paragraph, "Awrap around@" should be corrected.
- Appropriate correction is required.

***Claim Objections***

3. Claims 1-7, 10, 15 and 16 are objected to because of the following informalities:
- a. Claim 1, line 1, "via plurality" should be --via a plurality--.
  - b. Claim 5, line 3, it appears that the limitation "to its maximum delay in the event that the maximum delay (Td) is insufficient" should be changed to --to its minimum delay in the event that the maximum delay (Td) is insufficient--, and in lines 4-5, "or to its maximum delay (Td) if its maximum delay is insufficient" should be changed to --or to its maximum delay (Td) if its minimum delay is insufficient-- in order to correspond with page 9 of the instant specification.
  - c. Claim 10, line 2, "half maximum" should be --half a maximum--.
  - d. In the last line of each of claims 11, 15 and 16, it is suggested that the limitation "and vice versa" should be replaced with --and the delay is controlled to revert to the maximum delay in the event that the minimum delay is insufficient to achieve synchronization-- for clarity.
  - e. Line 4 of claims 15 and claim 16, "synchronisation" should be --synchronization-- to provide consistency with claim 11.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 4, 8, 9 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato et al. WO 99/46687.

It is noted that U.S. Patent 6,359,815 is the U.S. national stage entry of PCT/JP98/01032, and is relied upon in the rejection as an English equivalent of PCT Pub. No. WO 99/46687.

6. Regarding claims 1 and 8, Sato et al. disclose an apparatus for receiving parallel via a plurality of channels (see Figs. 21, 22) comprising means to generate a clock signal (CLK\_R) and means associated with each of the channels to synchronize the received data with the generated clock signal (flip-flops 2121-2124), where CLK\_R may be derived from one of the received reference signals (col. 17, lines 46-52).

7. Regarding claims 2 and 9, in Fig. 21A, the means for generating a clock signal include delay means (variable delay circuits 2101-2104) for delaying the clock signal.

8. Regarding claim 4, in Fig. 21B, the synchronizing means further includes variable delay circuits for applying a variable delay to each of the channels.

9. Regarding claim 12, in Fig. 21B the synchronizing means further includes variable delay circuits 2101-2104 for applying a variable delay to each of the channels, and Sato et al. further state in col. 17, lines 46-52 that the reference signal CLK\_R is passed through a delay circuit.

10. Claims 1, 2, 4, 8, 9 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Lai U.S. Patent 6,700,942.

11. Regarding claims 1 and 8, Lai discloses an apparatus in Figure 3 where a clock signal LCHCK is derived by clock generating means (sync logic block 30) from control clocks (C1-C3,

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FFRM) generated from the transmitted channel words (col. 2, lines 41-49), which is generated on the basis of the received data (col. 5, lines 14-16), and synchronizing means 24 for synchronizing the received data with the generated clock signal.

12. Regarding claims 2 and 9, the clock generating means 30 includes a delay means 67 which provides a delayed version of the clock signal (FFRM-bar) as the generated clock signal LCHCK (see col. 5, lines 65-67, Fig. 3).

13. Regarding claims 4 and 12, Lai further disclose that the synchronizing means include variable delay means comprising a set of latches for applying a variable delay to the channels (col. 4, lines 11-19).

#### ***Allowable Subject Matter***

14. Claims 3, 5-7, 10, 11 and 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and amended to overcome the objections raised in this Office action.

#### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Saito U.S. Patent 6,452,421 discloses an interface circuit for receiving parallel data including a variable delay circuit controlled according to phase differences between a system clock and a source synchronous clock received.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David B. Lugo** whose telephone number is **(571) 272-3043**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jay Patel**, can be reached at **(703) 308-7728**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, VA 22313-1450

**or faxed to:**

**(703) 872-9306**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dl  
8/20/04

  
**KHAI TRAN**  
**PRIMARY EXAMINER** 8/23/04